Kre8 Romantic Rube

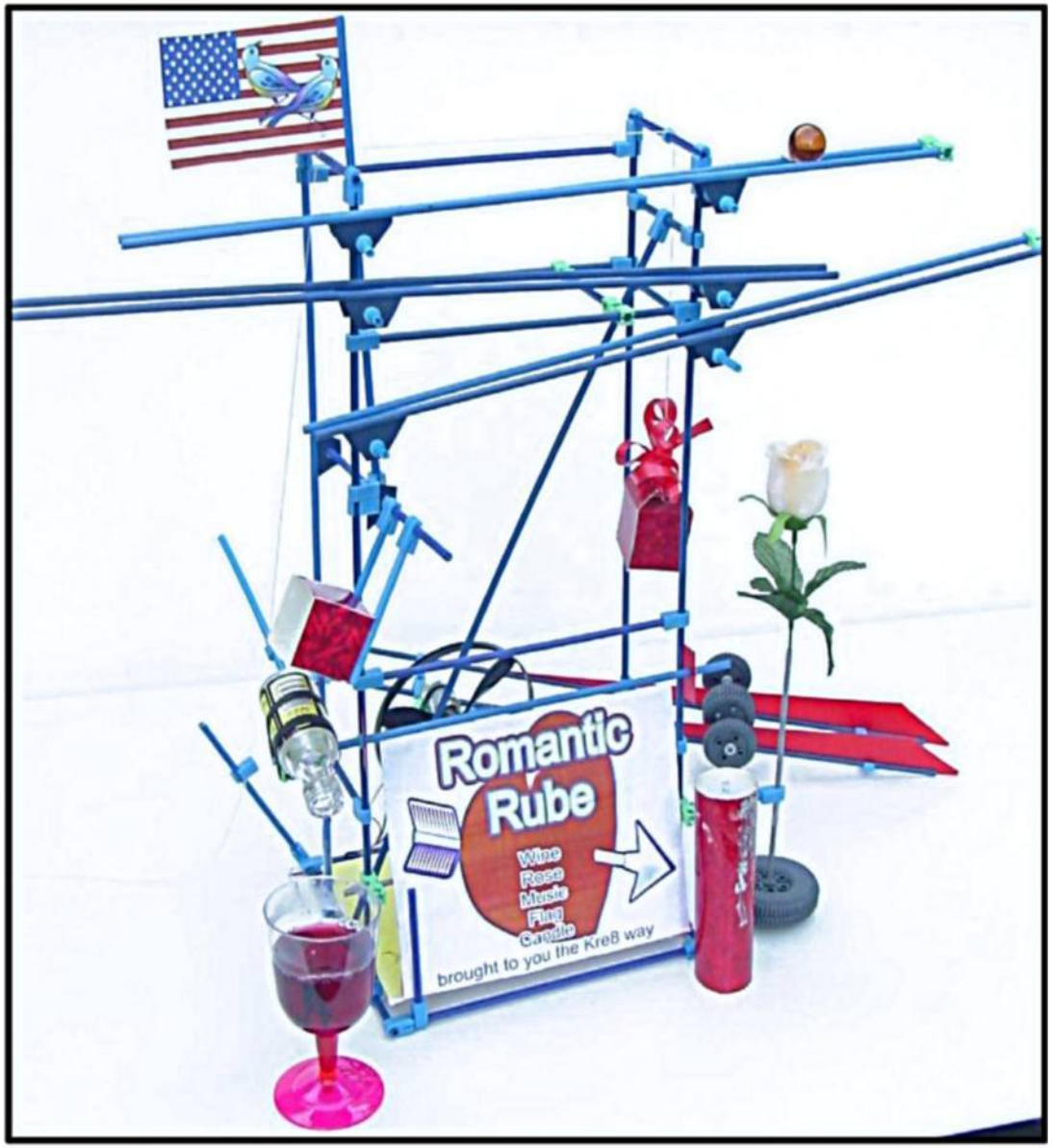
Contents

TASK

To make a fun activity that has things happening in a sequence that amuses and is initially powered by a marble. The example shown is explained below. To get other ideas you could use a search engine and type in words such as:Rube Goldberg, Heath Robinson. Inventions, crazy ideas, competitions, Honda car advert. YouTube (R) has some good examples under some of the keywords given

How does the example work?

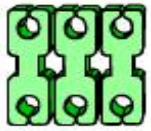
The action starts when a marble is placed at the start of the marble run and runs down into an open box which via leverage lifts the flag up. A second marble runs down and jumps off the end of main marble run to trigger the wheels which roll down the long red track. This then releases the rose which swings upright. At the same time a lever tips the wine bottle and fills the wine glass. As this happens two wires touch and the propeller blows the music card open which starts the music. Lastly the candle LED glows.



Romantic Rube - Parts List

version 2

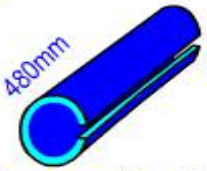
Note - Some parts need cutting to size - see Parts List



5 x Multiblocks (green)

14 x Clip connectors (blue)

9 x 5mm dia Slit rod (blue)



14 x 5mm dia. slit rod (blue)

8 x 5mm dia. slit rod (blue)

4 x 5mm dia. slit rod (blue)

4 x 5mm light blue tube

2 x 3.9mm tube (grey)

6 x 40mm wheel

1 x 4 mm snap rod

4 x Grey collars

22 x Blue collars

Blue plastic

(or other color)

2 x plastic sheet

2 x 70mm dia wheels

1 x electric motor (fast type)

1 x Propeller

safety propeller

1 x 3v battery holder with swtich

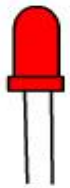
1 x 1.5 battery holder for LED

Red plastic strip

1 x plastic strip

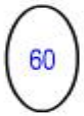
1 x LED for candle

3 x glass Marbles



LED for candle light

2 x Holographic A5 card



2 x Rubber band

4 x Rubber band

1 x String 1m

The rods are easier to insert into the connectors if **twisted** as they are pushed into place.
Younger students should **'round off'** and smooth the tube and rod ends.

Trim all sharp edges after cutting

Tools

Snips (or wire cutters and string sharp scissors)
Use to cut Kre8 connector hinges, plastic sheet, light blue tubing
(the serrated blades are better than smooth blades).

Emery Cloth
Assembly is easier if you use fine 'emery cloth' or other 'abrasive paper' to round and smooth the slit rod or blue tube ends.

Pencil and Rule
Use to mark lengths of blue tube or slit rods before cutting. Can also be used on plastic sheet before shapes are cut out. (FREE rule at bottom of page)

Clear Tape

Other things you may want

(Depending on what you want to make)

Flower (artifical will do)
Small bottle (e.g. miniture)
Music card
2 x AA batteries

A possible way to work

Design Stage
****
Gather and research possible ideas
Look on the web for Rube models etc made by others
Experiment with some of these ideas
Making Stage
****
1) Make a basic frame
Remembering to add stiffeners by using:
Horizontal stiffeners and
Diagonal stiffeners (using triangulation.)

2) Plan ahead and add extra connectors for use later.
3) Experiment with actions then add to frame(s).
4) Adjust and refine as needed.

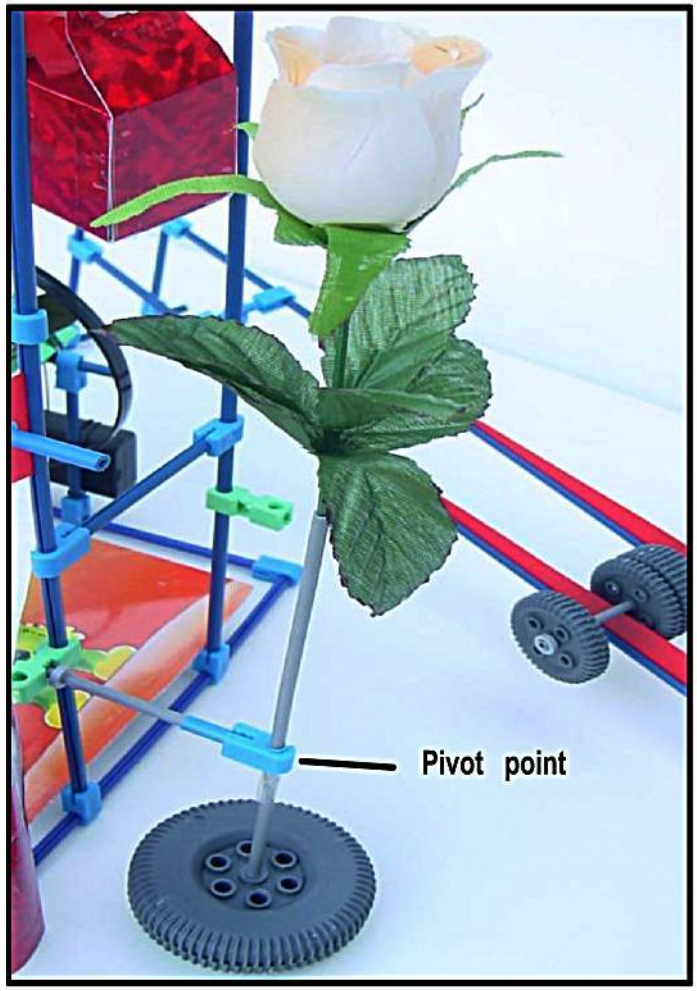
If you want to make the example given you will also need the following extra things.

Flower (artifical flower will do)
Small bottle (for drink)
Plastic wine glass (to fill when bottle empties)
Music card - opens and plays a tune
3 x AA batteries (for fan and candle)

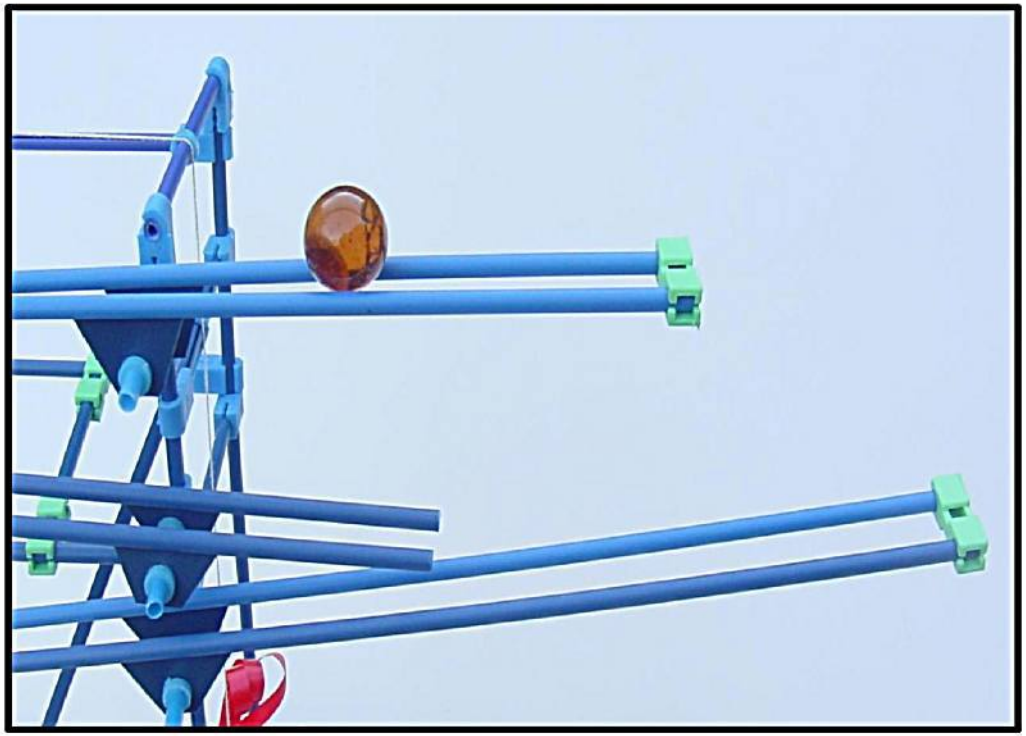
The next few pages explains how the Romantic Rube Goldberg Model shown was made.

Other help making a frame
****
Visit the Kre8.com website and look at the marble run instruction also see this in action by looking at the movie.

Romantic Rube - Making 2



The white plastic flower 'pops up' when tiggered.
It works using a bottom heavy lever that pivot up when
a counterweight is knocked off the top part.



The marble runs along the rods rails kept apart by using
the green connectors a the end and by triangluar pieces
of plastic that are inserted in the slit rods as shown below.

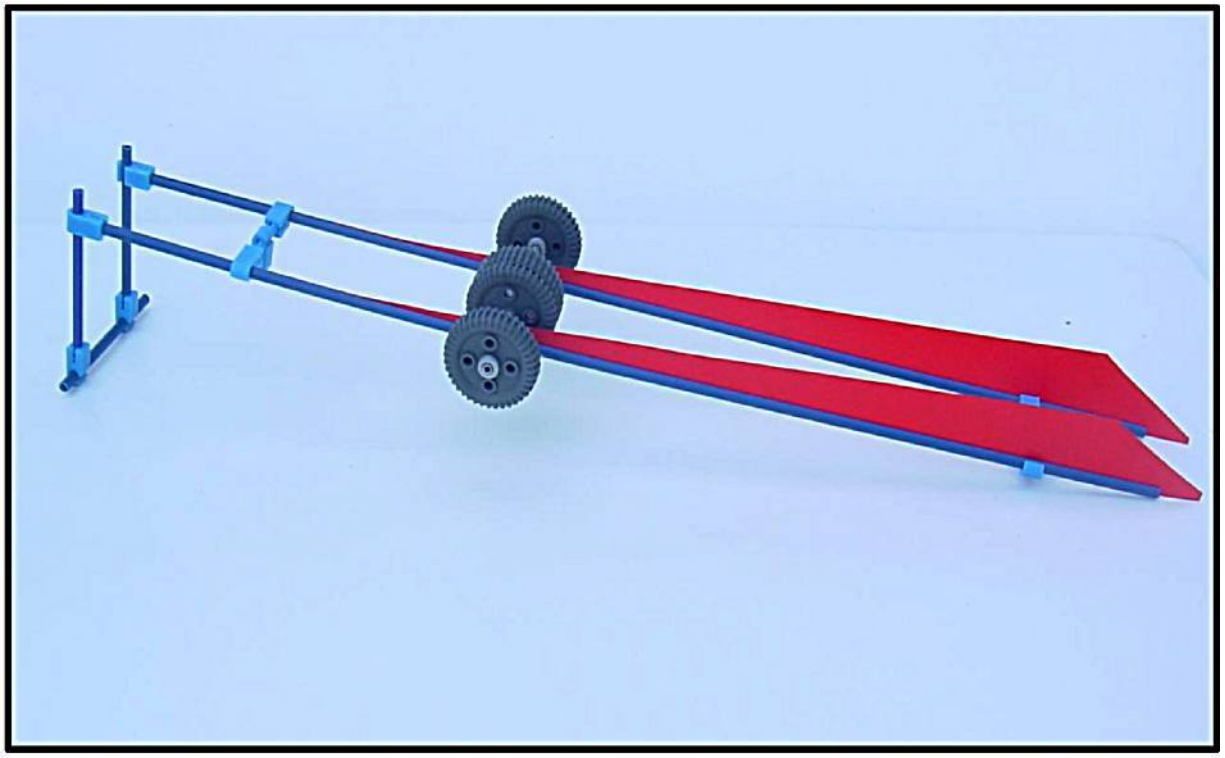
Romantic Rube - Making 3

This shows the small bottle just after it has poured the wine (coloured water) into a plastic glass (for safety) It is set up by having the bottle on the point of tipping. When the weight is released (disguised as a red present box on the other image) it lifts makes the bottle tip over.

The wine bottle before it is made to pour the wine. You can also see (side view) a motor at the back and the black fan'. When electrical contact is made the fan starts blowing which in turn triggers the musical card.

Romantic Rube - Making 4

This electric candle is made from an LED light that glows when triggered.
Made from a tube of card with battery hidden inside and LED at the top (in the centre of a pop bottle lid)

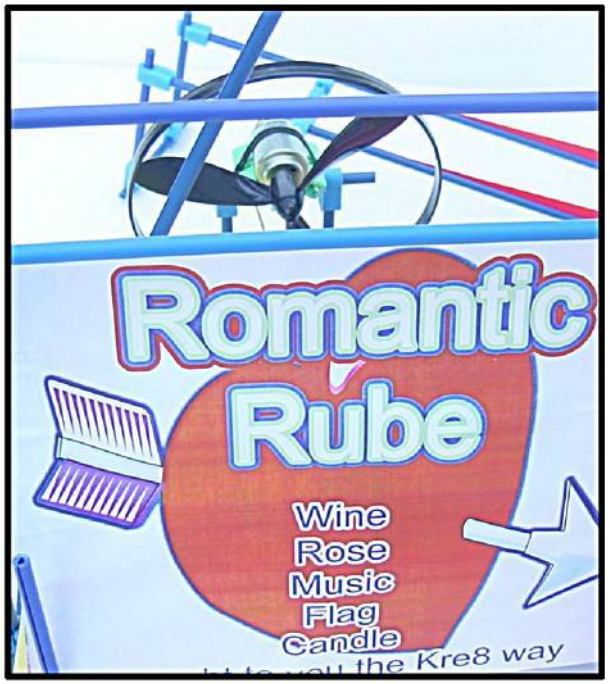


The wheel assembly rolls slowly down and then over the end and along the floor to hit and release the rose (shown on an earlier page)

Parts to make this:3.9mm grey snap axle for wheels to be assembled on
Long slit tubes to make frame 40mm wheels Red plastic strip cut diagonally and inserted in the long slit rod.

Romantic Rube - Making 5

Detail showing the fan at the back which when triggered blows the card infront open enough to start the musical card.



Detail showing the fan at the back which when triggered blows the card infront open enough to start the musical card.

Notice the red plastic strip that is stuck to the table which guides a marble and is guided to the back where it triggers the wheel assembly (shown on an earlier page) which triggers the rose to 'pop up' which in turn makes the weight (disguised as the higher red present box) fall s down triggering the wine to be poured.